

REMARKS

Claims 1-14 and 29-37 were examined. Claims 15-28 and 38-46 are canceled. Applicants do not add or amend other claims. Accordingly, Claims 1-14 and 29-37 are pending.

Objection to the Specification

Applicants amend the title of the specification. Accordingly, withdrawal and reconsideration to the objection is respectfully requested.

Claims Rejected Under 35 U.S.C. §102

Claims 1, 3, 4, 29, 30 and 31 are rejected under 35 U.S.C. §102 as being anticipated by Li et al., U.S. Patent No. 6,756,620 B2 ("*Li*"). Applicants respectfully disagree with the rejection. To anticipate a claim, the Patent Office must show that a single reference teaches each of the elements of that claim.

According to the embodiment described with reference to Figure 6 that was cited by the Patent Office, *Li* discloses a memory structure having first protective film 124 and second protective film 132 sandwiching ferroelectric polymer (FEP) layer 126. (Col. 6, lines 8-16). Furthermore, *Li* discloses the second protective film 132 and a second or upper electrode 134 are formed in a configuration that may be referred to as "cross point" 136 or projection of the width *W*, of first electrode 118 upward onto second electrode 134 exposes an area of FEP structure 138. Examples of materials for protective films (with reference to another embodiment) include a metal, refractory metal, or refractory metal alloy; and a nitride, oxide or carbide of the metal, refractory metal, or refractory metal alloy. See col. 3, lines 29-38.

Among other limitations, independent Claim 1 recites an apparatus including a first metal layer, a metal nitride layer, a polymer ferroelectric layer adjacent to the metal nitride layer, a metal oxide layer adjacent the ferroelectric layer, and a second metal electrode. The metal nitride and metal oxide layers contain excess holes to recombine with electrons injected from the first and second metal electrode layers.

Claim 1 is not anticipated by *Li* because *Li* does not specifically teach a metal nitride or metal oxide layer that contains excess holes.

Claims 3 and 4 depend from Claim 1 and therefore contain all the limitations of that claim. For at least the reasons stated with respect to Claim 1, Claims 3 and 4 are not anticipated by *Li*. Accordingly, Applicants respectfully request the Patent Office withdraw the rejection to Claims 1, 3 and 4.

With respect to Claim 29, Claim 29 recites wherein the metal nitride and metal oxide layers include a plurality of electron traps. *Li* at least does not teach this limitation. According to the Patent Office, Fig. 6 teaches “a plurality of electron traps.” (See page 6 of the Office Action mailed on 8/26/05). Applicants respectfully note that Fig. 6 depicts a crystalline ferroelectric polymer (FEP) structure 138, a protective film 124, and a protective film 132. The Patent Office has interpreted the *Li* protective films 124 and 132 to be the metal nitride and metal oxide layers. However, neither the protective films 124 and 132 are specifically described include a plurality of electron traps. Since *Li* at least fails to disclose the metal nitride and metal oxide layers include a plurality of electron traps, *Li* does not teach or suggest each of the limitations.

Claims 30 and 31 depend from Claim 29, and therefore contain all the limitations of that claim. For at least the reasons stated with respect to Claim 29, Claims 30 and 31 are not anticipated by *Li*. Accordingly, Applicants respectfully request the Patent Office withdraw the rejection to Claims 29, 30, and 31.

Claims Rejected Under 35 U.S.C. §103

Claims 2, 5, 10, 32, and 35 are rejected under 35 U.S.C. §103(a) as obvious over *Li*. Applicants respectfully disagree with the rejection.

At the time the claimed inventions described by claims 2, 5, 10, 32 and 35 were made, the claimed inventions and *Li* were commonly owned by Intel Corporation. Thus, under 35 U.S.C. §103(c), *Li* does not qualify as prior art. Applicants respectfully request that the Patent Office withdraw the rejection of claims 2, 5, 10, 32 and 35 under 35 U.S.C. §103(a).

Allowable Subject Matter

Applicants note with appreciation the Patent Office's indication that Claims 6-9, 11, 13, 33-34, and 36-37 contain allowable subject matter. Applicants do not amend these claims as suggested by the Patent Office as Applicants believe the independent claims from which these claims depend are patentable for the reasons stated herein. Applicants respectfully request that the Patent Office withdraw the objection to claims 6-9, 11, 13, 33-34 and 36-37.

CONCLUSION

In view of the forgoing, it is believed that all claims now pending are in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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William T. Babbitt
William Thomas Babbitt, Reg. No. 39,591

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025
Telephone (310) 207-3800
Facsimile (310) 820-5988

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Nedy Calderon 11/28/05
Nedy Calderon Date